study was to estimate the cost-effectiveness of ivabradine versus diltiazem as an alternative bradycardic agent in these patients. **METHODS:** A Markov chain Monte Carlo simulation model was used to estimate the effect of HR lowering on cardiovascular outcomes, including the economic consequences of ivabradine, 7.5 mg twice daily versus diltiazem, 240 mg once a day. Included patients had resting HR > **70 bpm.** Outcome events considered were acute myocardial infarction, stroke, heart failure and death, as well as revascularization procedures (coronary artery bypass graft and percutaneous coronary interventions). HR distribution was modelled as a gamma function and survival and time to hospitalization were modelled with weibull functions. Health outcomes were measured in life years (LY) and quality-adjusted life years (QALY). Time-horizon was set at 20 years and health outcomes and costs were discounted at 1.5% and 4%, respectively. The analysis was conducted following the Dutch guidelines for pharmacoeconomic research. **RESULTS:** For each 100 patients assumed to use ivabradine or diltiazem, ivabradine was estimated to gain 44 LY (95%CI: [24;70]) and 36 QALY (95%CI: [22;52]) versus diltiazem. Annual incremental per patient cost of ivabradine versus diltiazem was estimated at €178 (95%CI: [138;207]). The incremental cost-effectiveness ratios for ivabradine versus diltiazem were estimated at €7990 per LY and €9897 per QALY gained. **The probability of** accepting ivabradine following the informal Dutch willingness-to-pay threshold of €20,000 per QALY was estimated at 99%. **CONCLUSIONS:** Ivabradine was found to be a cost-effective alternative for the treatment of SA in patients with resting HR > 70 bpm with **contraindication or intolerance for beta-blockers.**

**PCV98**

## COST-EFFECTIVENESS OF ORGANISED INPATIENT CARE FOR STROKE

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**OBJECTIVES:** The aim of this study was to assess the clinical and economic benefits of the stroke units compared with conventional care. **METHODS:** A Markov model was developed. Four clinical conditions were defined : first ischaemic event, first cerebral haemorrhage, recurrent ischaemic , recurrent haemorrhagic. Three lines of management were identified after hospitalisation: rehabilitation, home, and geriatric institutions. Three levels of incapacity were identified using the Barthel index. The clinical benefit was measured as survival without loss of independence (Barthel 95–100). The relative risks of death or institutionalisation, or death or dependence after passage through a stroke unit were analysed in comparison with conventional hospital services from the data available in the Cochrane meta-analyse on stroke units. All of the cost calculations were made from the perspective of the health care system. Expenditures were discounted at a rate of 5%. **RESULTS:** The mean cost per patient at 5 years was €30,983 in a conventional care unit and €34,638. in a stroke unit.After 5 years, the cumulative expenditure for the care of 120,000 patients in conventional care units was €3.710 million. Where care is generalised in a stroke unit, this figure increases to €4.160 million. In the 5 years following hospitalisation, patients cared for in stroke units survive for more trimesters without sequalae than those cared for conventionally (11.6 vs. 8.28). Comparison of the additional cost and added efficacy gave a ratio of €1359 per year of life gained without disability (Barthel 95**–100).** €513). **CONCLUSIONS:** The cost-effectiveness ratio between for stroke units is much lower than the threshold for cost-effectiveness considered acceptable by the international scientific community (€53,400). This extremely favourable ratio could justify organisational changes and the establishment of stroke units in the hospital environment.

**PCV99**

## PHARMACOECONOMICS OF DIRECT RENIN INGIBITOR ALISKIREN IN HYPERTENSION TREATMENT OF PATIENTS WITH TYPE-2 DIABETES AND NEPHROPATHY

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**OBJECTIVES:** In Russian Federation (RF) just 25% of patients with hypertension (HT) reach target blood pressure goals. Moreover, patients with concomitant Type-2 diabetes have a small chance of successful treatment. Direct Renin Inhibitors (DRI) —the newest class of antihypertensive drugs with clinically important nephroprotective properties. The aim of the study was to assess cost-effectiveness ratio of DRI aliskiren in treatment of patients with HT, Type-2 diabetes and nephropathy in Russia. **METHODS:** A lifetime Markov model basing on results of AVOID study was developed. Incremental cost-effectiveness ratio (ICER) of aliskiren + losartan vs placebo + losartan was assessed. In the model it is conservatively assumed that no additional benefit of aliskiren is extended to periods after 6 months according to 6-months AVOID trial. Direct medical costs were calculated basing on tariffs of Federal Obligatory Medical Insurance Fund of the RF. Health outcomes were quality-adjusted life years (QALY) and life-years gained (LYG). Clinical and economic outcomes were discounted at 3.5%. **RESULTS:** Cost-effectiveness of aliskiren for 60-years old patients in HT, Type-2 diabetes and nephropathy is within the range of 280 thous. rubles/LYG (300 thousand rubles/QALY) for early overt nephropathy to 525 thousand rubles/LYG (570 thousand rubles/QALY) for microalbuminuria. Sensitivity analysis depending on age of patients between 55–65 years old demonstrates non-significant difference (± 5%) of ICER. In accordance with the budjet of the RF in 2009, gross domestic product per capita is 360 thous. rubles and ICER is within the range of values that are considered acceptable for Russian Health Care system. **CONCLUSIONS:** ICER of aliskiren usage in antihypertensive treatment of patients with HT, Type 2 diabetes and nephropathy is comparable with ICER of other cardiovascular drugs included into Russian reimbursement. So aliskiren have to be available for countrywide health care systems regardless of age of patients.

**PCV100**

## THE RELATIONSHIP BETWEEN HIGH DENSITY LIPOPROTEIN CHOLESTEROL (HDL-C), NICOTINIC ACID AND ALL-CAUSE MORTALITY

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**OBJECTIVES:** Translate clinical benefits of raising HDL-C into life years saved (LYS) using randomized placebo controlled clinical trial data of NIASPAN as monotherapy (NER), or in combination with statin (NER/S), in patients with inadequate HDL-C control. **METHODS:** Two analyses were undertaken: translation of clinical benefits into survival benefits using NER, and NER/S, in patients lacking optimal HDL-C control. Validated equations (HDL-C Mortality Equations), were used to translate HDL-C and LDL-C into reductions in mortality. NER effects are taken from placebo-controlled trials. Comparative efficacy of NER/S is taken from seven clinical trials with NER/S versus a statin only. The treatment arms were categorized by dose and the weighted average effects were calculated for change from baseline in HDL-C as and LDL-C. **RESULTS:** Applying the regression parameter estimates from the validated equation (i.e., 1.02 for LDL-C and –1.51 for HDL-C) to NER trial results, and after adjusting for the placebo effect, yields the estimated percent reductions in cardiovascular events, 23.22%, 34.89% and 36.4% at 1000 mg/day, 1500 mg/day and 2000 mg per day, respectively. Translating increases in HDL-C by adding NER/S after adjusting for the statin alone effect are 0.10 mmol/L, 0.2213 mmol/L and 0.2063 mmol/L for 1,000 mg, 1,500 mg and 2,000 mg per day, yielding *27.16, 59.75*, and *55.7* lives saved per 10,000 patients. The Prospective Studies Collaborative report a *0.33 mmol/L* increase in HDL-C is associated with about *a third (33%)* lower IHD mortality. Weighted average increases in HDL-C, with NER/S are 0.318 mmol/L. Applying change in HDL-C values using the HDL-C Mortality Equations with bootstrapping, the hazard ratios are reduced by 29% [95% CI: –0.34––0.23], 30% [95% CI: –0.35––0.24] and 32% [95% CI: –0.38––0.26]. **CONCLUSIONS:** Nicotinic acid increases survival in patients with low HDL-C when used as NER or NER/S.

**PCV101**

## IS PRASUGREL COST-EFFECTIVE RELATIVE TO CLOPIDOGREL IN PATIENTS WITH ACUTE CORONARY SYNDROME UNDERGOING PERCUTANEOUS CORONARY INTERVENTION FROM THE PERSPECTIVE OF THE GERMAN HEALTH CARE SYSTEM? A MODEL-BASED ANALYSIS

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**OBJECTIVES:** In patients with acute coronary syndromes (ACS) undergoing percutaneous coronary intervention (PCI), the TRITON-TIMI 38 trial demonstrated that treatment with prasugrel vs. clopidogrel was associated with significantly reduced rates of atherothrombotic events, though with increased risk of bleeding. We evaluated the long-term cost-effectiveness of a 12-month treatment with prasugrel vs. clopidogrel in the trial population, excluding patients with prior transient ischemic attack or stroke, from the perspective of the German health care system. **METHODS:** A Markov model was developed based on risk equations for cardiovascular death, myocardial infarction (MI) or stroke, bleeding, and rehospitalisation, derived from TRITON-TIMI 38 data (N = 13,608 patients). Hospital readmissions captured during the trial in all patients from 8 countries (N = 6705) were assigned to German diagnosis related groups, and hospitalisation costs continued to accrue beyond 12 months to all surviving patients. Long term survival and quality adjusted survival were estimated for the life-time of each patient. **RESULTS:** At 12 months, a difference in drug costs between prasugrel and clopidogrel of +105 (branded clopidogrel) to +€416 (generic clopidogrel) per patient was partially or totally offset by hospital cost savings (–€129 per patient) due principally to reduced rates of revascularization. In the longer-term, prasugrel was associated with higher total costs (+€42 to +€353 per patient), life expectancy gains of 0.07 years, due primarily to the reduced rate of MI, and 0.05 additional QALYs, resulting in incremental costs per life year saved and per QALY gained of €606 to €5074 and €799 to €6689, respectively. Probabilistic sensitivity analysis indicated that prasugrel has a ≥79 to 88% probability of being more cost-effective than clopidogrel at a willingness to pay of €30,000 per QALY. **CONCLUSIONS:** Prasugrel given for up to 1 year in ACS-PCI patients is likely to be considered a highly cost-effective treatment strategy.

**PCV102**

## COST-EFFECTIVENESS OF VARIOUS 'SCREEN-AND-TREAT' SCENARIOS DIRECTED AT ELEVATED ALBUMINURIA TO PREVENT CARDIOVASCULAR AND RENAL DISEASE IN THE GENERAL POPULATION

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**OBJECTIVES:** Albuminuria has been proven to be associated with renal disease progression and cardiovascular (CV) events. Limited evidence exists on the cost-